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Protected Areas and Watershed Management

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Cover Photo: Cascades and valley woodlands on Spencer Creek below Webster Falls,
Webster Falls Conservation Area, Hamilton Region Conservation. By: Tom J. Beechey.

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ing the needs for public safety and preserving forest resources, can be problematic. Fire growth simulation modeling is an important tool for park planners to meet these conflicting goals. With the recent releases of *Prometheus*, (Canadian Wildland Fire Growth Model) park/resource managers now have access to better decision support tools to address fire management issues. Algonquin Provincial Park (APP), in Ontario, poses an interesting challenge to both planners and *Prometheus* because of the competing demands placed on the forest resources and the desire to re-introduce fire. *Prometheus* is a very flexible model and can be used in a variety of ways from real time fire simulations to development of fire probability maps. The development of a fire probability map for APP, using *Prometheus*, provides one method for identifying high-risk areas. The results indicated that the probability of fire varied spatially but still remained quite low for the entire park. *Prometheus* is still under development, but it is an essential tool for park planners in developing fire plans for large parks.

WHAT IS ECOSYSTEM RECOVERY AND HOW SHOULD WE MEASURE IT IN OUR PARKS?

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Abstract

Southwestern Ontario, or the Carolinian ecozone, is the most heavily populated region of Canada. Natural habitat cover is as low as 5% in some counties. Furthermore, human-induced disturbance has been great in many of the remaining natural habitats, including Rondeau and Pinery Provincial Parks and Point Pelee National Park. Consequently, managers have recognized the need for active habitat restoration. How do managers know that their restoration efforts have lead to ecosystem recovery and that conservation targets are being met? This question presupposes that ecosystem response to management can be easily quantified. Lessons learned from 12 years of research into forest and savanna responses to management for high white-tailed deer populations and prescribed burning in these parks will be used to address this question. Our three main conclusions are: 1) "one size does not fit all" when it comes to assessing different management regimes, 2) "a multi-scale approach is essential" – without one, important habitat changes will likely be missed; and, 3) "change is slow" – these habitats usually respond over decades.